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Memory of Professor Kawagoe

Jack E. Snell

Professor Kawagoe was a very special man in the field of fire safety. He was a gentle giant, a pioneer, and a wonderful inspiration and friend to many around the world. On a personal note, I miss him. I sense we all do. He would have had fun with us at the reception in my home, and Friday celebrating and honoring the work of Ed Zukoski, and Saturday on the bus tour. He had a delightful sense of humor and brightened any group with his presence.

I had the privilege and pleasure to be with this remarkable man on a number of occasions, in particular the meetings of the UJNR Panel on Fire Research and Safety, from 1982 to the last Japan meeting of this panel in 1992 at the mini-symposium in Nasu where this photo was taken. I also was with him in Avila, Spain, at the first international meeting of fire research and test centres; and at 1st and 3rd IAFSS meetings - here and in Edinburgh - and at Interflam.

When I came to fire research in 1982, Kawagoe had already completed his tours as Director General of BRI and as a member of the Board of CIB. (He remained active in CIB W14 for some 40 years.)

Over the years, there have been close parallels between Kawagoe's work and our research here at NIST - response of steel structures to fire, smoke strata in room fires, burning behavior of mattresses and upholstered furniture, and, of course, mathematical fire modeling. In FRIS, the NIST Fire Research Information Service, we have some 37 English language papers authored by Kawagoe, 16 of which he is lead or sole author.

In the early 1980's, inhalation toxicity of the products of combustion was a matter of wide concern in a number of countries. Work was underway to develop a small scale test method to address this issue. NIST and Japan used similar furnaces for smoke generation. NIST used rats and Japan mice for the smoke exposures. In Europe, work centered around the DIN method, based on a tube furnace and analytical testing of combustion products. Kawagoe approached us with his concerns about this DIN method, which was not based on an established relationship to real fire exposures, becoming accepted as the basis for international standardization. As a result, Fumiharu Saito came to the U.S. and we formed a tripartite - Japan-USA-Canada - research program on smoke toxicity to provide definitive data and hopefully an alternative to the DIN method. That strategy paid off. Just now, about a dozen years later, a method based on that research is moving towards ISO acceptance.

This illustrates the point Kawagoe made in his 1988 Howard Emmons lecture at the Second IAFSS symposium in Tokyo. Many of you will remember that paper, it was entitled, "Real Fires and Fire Modeling". In it, Kawagoe emphasized the importance of full-scale fire experiments as a part of any research project. The tripartite research program led to the only definitive full-scale

smoke toxicity data collected to date and consequently to the only experimentally-verified toxicity test method.

In Nasu, Kawagoe and I got going on the subject of the potential for application of fire models in fire safety design. In the mini-symposium, we had just heard a number of papers describing the use of such models in Japanese Fire Safety Design Method and by leading Japanese construction engineering firms. Kawagoe insisted NIST "stay the course" and continue to press for further development and use of these tools.

When I read the obituary on Kawagoe by Phillip Thomas that appeared in the Fire Safety Journal (volume 23, 1994), I was startled to read what Thomas said that Kawagoe had told him some thirty years earlier was the aim of fire research. It is he said, "to abolish the fire resistance test". This sounded just like what he was telling me in Nasu.

How many of us are pursuing that same vision, to get beyond the old traditions of "unscientific" rating and ranking methods. Kawagoe did indeed have a wonderfully direct way of making his point. He had a clear vision for the future of fire safety engineering. I think he must be delighted to see us remembering him today by continuing the important work of fulfilling that dream.